State of Alaska FY2003 Governor's Operating Budget

Department of Natural Resources
Geological Development
Component Budget Summary

Component: Geological Development

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Component Mission

"...determine the potential of Alaskan land for production of metals, minerals, fuel, and geothermal resources; the location and supplies of groundwater and construction materials; the potential geologic hazards to buildings, roads, bridges, and other installations and structures..." (AS 41.08) (Differs from SLA 2001, CH90)

Component Services Provided

DGGS is the state's lead source and repository of Alaska geologic information and the primary source of information concerning Alaska's mineral resources and geologic hazards.

DGGS provides the geologic information needed for economic diversification, revenue generation, public safety, infrastructure development, and resource management in the state of Alaska.

DGGS has a strategic role in the generation and maintenance of Alaska's economy, and public safety with respect to natural geologic hazard mitigation.

DGGS geologists locate or stimulate the discovery of minerals, coal, oil, gas, geothermal energy, construction-quality sand and gravel, and water.

DGGS provides geologic data and assessments used by other DNR agencies (Mining, Land & Water, Oil & Gas, Parks, Agriculture, and Forestry), state departments (e.g., Community and Economic Development, Transportation & Public Facilities, Military and Veterans Affairs), and municipalities. Information provided to non-DNR agencies has been used to plan natural hazard mitigation in urban cities and remote villages, select transportation-corridor lands for Alaska, provide information needed to better design roads and other infrastructure, and catalyze private sector investment.

DGGS maintains Alaska's archive of representative geologic materials from across the state including oil- and gasrelated samples, and mineral-related and coal samples collected by DGGS and donated by industry and numerous Federal agencies. These samples, acquired from mineral surveys and private sector exploration and development ventures, represent millions of dollars of acquisition cost. The samples provide the reference collection of materials used by the petroleum and mineral industry to guide new exploration ventures.

To focus attention on Alaska's subsurface resources, DGGS conducts field-based geological and geophysical surveys of state lands and publishes professional and popular reports, maps, and circulars to disseminate to its diverse customers the information gathered.

Component Goals and Strategies

The goals of DGGS are closely aligned with those of the Governor, AS 41.08, and the philosophy reflected in DNR's five major goals:

DGGS seeks the following outcomes:

- 1. Encourage private sector investment in ventures that will develop Alaska's mineral, oil and gas, coal, and construction materials.
- 2. Mitigate the adverse effects of naturally occurring geologic hazards on the economy of Alaska and the safety of Alaskans.

Major Goals and Strategies

| Released December 15th | FY2003 Governor | |
|------------------------|---------------------------------|--------|
| 12/18/2001 2:02 | Department of Natural Resources | Page 2 |

DGGS pursues these outcomes through the products and services provided from five major programs. In order to implement these programs, DGGS pools funds from the Division's annual General Fund base-budget, Federal Receipts, Legislatively designated Program Receipts, and Capitol Improvement projects. Federal Funds and Program Receipts funds are sought only for program activities that are closely aligned with the mission specified in AS 41.08 and the Division's Mission and Measures statement. Likewise, CIP funds address geologic resource problems or goals that DGGS has been specifically asked to pursue. Currently, sixty percent of Alaska's geological and geophysical program is financed from non-general fund budget sources. Securing the complementary funds required to implement the mandates of AS 41.08 and our Mission statement on an annual basis is never assured.

The following tasks within our five major programs constitute the Division's strategy for meeting the goals of the DGGS Mission Statement.

Statewide Mineral Appraisal Program

Contingent on FY03 CIP funds, geophysically survey 1000 sq. miles (640,000 acres) of high-potential mineral tracts per year to provide the geophysical data needed to sustain Alaska's mineral industry investments and create jobs throughout Alaska.

Funded by FY03 General Fund base-budget and committed airborne geophysical/geological mineral inventory CIP funds, conduct ground-truth geologic mapping and release interim geologic maps of the Big Delta C-3 15' quadrangle and two adjacent quarter quadrangle areas; the Big Delta SW C-2 and NE B-3, that lie within the Salcha River - Pogo airborne geophysical tract. These maps will provide ground-truth geologic data needed to more effectively interpret the geophysical data previously generated for the Salcha River -Pogo mining district. The mapping area is a key to understanding regional geology near the Pogo mineral deposit and newly discovered Caribou prospect. Conducting investigations and releasing geologic data on this area will help the mineral industry and policy makers make informed decisions. Preliminary geologic maps, sample location maps, and tables of analytical data will be produced.

Gather, verify, and collate pertinent statistics and summary observations about the status of Alaska's mineral industry to document the industry's annual achievements and encourage others to participate. The summary of these data will be published as the FY03 edition of an annual report on the status of Alaska's mineral industry. This document is widely circulated and is recognized as the best source of authoritative statistical data on Alaska's mineral industry.

Provide authoritative briefings about the status of Alaska's mineral industry, State support for mineral ventures, and recently acquired geophysical and geological data at professional mineral industry conventions and trade shows, and in professional journals. These presentations are an effective means of bringing the favorable mineral development potential of Alaska to the attention of corporate exploration managers and others who make mineral industry investment decisions.

Produce a ground-truth geologic map of the Delta mining belt from data contributed to DGGS by the private sector. Several different companies collected geologic and geochemical data over many years of investigation. Synthesizing and releasing the data to the public at large will add to a better understanding of the geologic framework of Interior Alaska and encourage mineral investment in the region.

Produce a ground-truth geologic map of the Broxson Gulch area near Paxson as part of a cooperative project with the Geologic Survey of Canada to better understand and disseminate knowledge about regional metallogeny in a 600 km long metallogenic terrane that ranges from British Columbia to southcentral Alaska. The terrane is favorable for deposits of platinum group metals, nickel, copper, and gold. DGGS will publish the paleontologic information and a preliminary geologic map in FY03. Synthesizing and releasing the data to the public at large will add to a better understanding of the geologic framework of southcentral Alaska and encourage mineral investment in the region.

Contingent on Federal funding compile a georeferenced database of internal geochemical data from past DGGS projects and make this information accessible on the Internet. Analyses of major oxide and trace element geochemical analyses from bedrock voucher samples will be screened for quality data. The resulting database will include the sample's analytical history, laboratory, vintage, degree of reliability, and associated project information. These data can provide fundamental new insights regarding the state's geologic framework relative to mineral deposits.

Contingent on Federal funding, compile a GIS-based georeferenced bibliography of bedrock geologic mapping of Alaska showing what geologic mapping is available for the state, its vintage, and level of detail. Make this information

accessible on the Internet. This project will provide the database needed to answer a question posed by the Legislature in FY00, i.e., "what is the status of geologic mapping in Alaska?" It also will provide a useful starting point for anyone needing technical geologic framework information for an Alaska venture.

Contingent on Federal funding, begin a two-year project to compile a georeferenced database of geochemical data for the Aniak mining region in southwestern Alaska. Previously unpublished chemical analyses of bedrock samples and geochemical data from stream sediment samples generated by federal agencies, some Alaska Native Corporations, and some private sector corporations will be included with existing DGGS, U.S. Geological Survey, and U.S. Bureau of Land Management data. The resulting database will reference the analytical technique, laboratory, vintage, degree of reliability, and associated project information for each sample. The data will be published by U.S. Bureau of Land Management in conjunction with DGGS.

The World Wide Web has become one of the most important avenues for dissemination of information about Alaskan geologic resources. Some of the information that needs to be made available includes mining statistics, status of current mineral-related geologic field projects, summaries of geophysical survey locations and project information, and an updated GIS-based summary of significant mineral deposits in Alaska. This carefully organized information will be made available via the DGGS website and will be useful to the mineral industry, policy makers, other government agencies, and to the general public.

DGGS Mineral Appraisal Project geologists will provide timely responses to verbal and written requests for mineral information from other State agencies, local government, and the general public.

2. Statewide Energy Resource Assessment Program

Contingent upon Statutory Designated Program Receipts, complete year four of a five year project to determine the stratigraphy and reservoir potential of Nanushuk and Tuluvak Formation sandstones exposed along 120 miles of the northern Brooks Range foothills and Colville River in order to provide key geologic framework elements to aid future oil exploration in the central North Slope. This work will include 1:63,360-scale bedrock geologic mapping of oil-stained Cretaceous strata and evaluate source rock potential of selected rock units in the southern Colville Basin and northern flank of the Brooks Range to help identify favorable oil or gas exploration plays.

Funded by a CIP appropriation, complete evaluation of potential hydrocarbon source rocks in Tertiary (66.4 -1.6 million year old) rocks in the southern McGrath Quadrangle by collecting additional samples for hydrocarbon source-rock evaluation analyses.

Contingent upon Federal funding, initiate the first year of a three-year program to develop lightweight coiled-tubing microborehole drilling technology to test coalbed methane potential and gas producibility at three high-priority rural Alaska sites.

Funded by a Federal contract, acquire new geochemical data for coal in the Kobuk River and Nulato coal fields in order to classify that coal resource's quality in support of future coal prospecting, leasing, and coalbed methane leasing in Alaska.

Funded by a Federal contract, conduct the first year of a two-year basinwide energy resource assessment of the Yukon Flats potential to contribute oil, conventional gas, and coalbed methane to domestic United States commercial markets through existing and proposed pipelines.

Evaluate the reservoir characteristics of a representative collection of 360 – 66.4 million year old North Slope and Brooks Range foothills rock formations. These rocks also occur in the subsurface within the North Slope Basin. Therefore, these data will help identify potential North Slope oil or gas reservoirs.

Contingent on Statutory Designated Program Receipts, expand the evaluation of reservoir characteristics of a representative collection of North Slope and Brooks Range foothills rocks ranging in age from 360 million years old to 66.4 million years old to provide porosity and permeability data characterizing their oil and gas reservoir quality.

Upon request, provide written evaluations of minable coal potential for lease areas in response to requests from Division of Mining, Land and Water Management.

Respond to verbal requests from other State agencies, Federal agencies, industry, local government, and the public for information on energy-related geologic framework and oil, gas, and coal resource data (estimated 80 responses).

3. Statewide Engineering Geology/Construction Materials Program

Produce written evaluations of potential hazards in areas of oil exploration leases, land disposals, permit applications, etc., and respond to verbal requests for information from other State agencies, local government, and the general public (estimated 250-300 responses).

As part of the Alaska Coastal Management Program, conduct reviews of Coastal Policy Questionnaires and consistency applications to ensure compliance with the state's geophysical hazards standard (6 AAC 80.050).

Conduct post-event hazard evaluations in response to unexpected major geologic events (e.g., earthquakes, volcanic eruptions, and landslides), providing timely information dispersal to the public via electronic as well as traditional methods, and providing event and continuing hazard information to appropriate emergency management agencies.

Contingent on partial Federal funding, complete a map of earthquake-induced liquefaction susceptibility in the Anchorage area.

Contingent on partial Federal funding through a cooperative project with the University of Durham, complete a study of sedimentologic evidence of great earthquakes in the Anchorage region as a basis for identifying possible methods for forecasting similar future events.

Contingent on partial Federal funding and in cooperation with the Division of Emergency Services, University of Alaska Geophysical Institute, and coastal communities, publish tsunami-inundation maps for Homer and Seldovia.

Supported by Federal funding through the Coastal Management Enhancement Grants Program, publish generalized earthquake ground-shaking hazard maps for southeastern coastal districts.

Contingent on continued Federal funding, publish a geologic map of Mt. Spurr volcano.

Contingent on continued Federal funding, participate in the second year of geologic mapping and hazards evaluation of Mt. Veniaminof volcano; Alaska's largest volcano, and one of the most poorly known. FY03 will be the second year of a planned three-year project.

Contingent on continued Federal funding, maintain and enhance the AVO web site. With as many as 500 visitors per day, the AVO web site is one of our most important information dissemination activities.

Publish a CD-ROM disk containing geographical, geophysical, geological, geochemical and land management data for the entire Aleutian volcanic arc in a georeferenced database format.

Provide final oversight, coordination, and helicopter contracting for multi-team fieldwork to conduct geologic-hazards studies and seismic monitoring of active volcanoes in the Cook Inlet, Alaska Peninsula, and Aleutian Islands regions.

Participate in volcano eruption response and hazard mitigation as needed to provide timely and accurate warnings and eruption information to emergency-response agencies and air-traffic controllers.

Provide field database and GIS support to ongoing mapping projects at Okmok Volcano and Veniaminof Volcano.

Contingent on anticipated Federal funding, initiate monitoring and hazards evaluation of far western Aleutian volcanoes.

Funded by a Federal grant, implement the second phase of a three-year project to apply remote sensing technology to an investigation of the Council mining district. The objective of this investigation is to identify prospective areas that may host previously overlooked placer gold resources.

4. Geologic Materials Center Program

In accordance with a framework of multiple interagency cooperative agreements, maintain the state's interagency archive of geologic materials (voucher samples of rocks, oil and gas well processed samples, core, rock, thin-sections, ore samples, and hard-rock mineral core) acquired from private companies and State and Federal agencies.

Systematically record and archive new geologic material pertinent to Alaska's energy and mineral resource development as they are submitted to the Geologic Materials Center.

Contingent upon Federal funding, install an updated GMC sample database on the World Wide Web so that the catalog of the Center's holdings is accessible to mineral and energy explorationists and other interested parties via the Internet.

With Federal funding, catalog all historical U.S. Bureau of Mines statewide mineral samples stored at the interagency Geologic Materials Center.

5. Geologic Maps and Reports Program

Assemble and edit the technical and educational maps and reports of DGGS in both conventional and digital format.

Contingent upon continued Federal funding, complete the design and construction of a Division-wide digital geologic database management system so that DGGS can improve its cycle time for responding to geologic resource and engineering geology queries and for completing its mineral and energy inventory studies in frontier areas.

Assemble, edit, and publish the Annual Mineral Industry 2000 report. This report preserves the definitive statistics for Alaska's mineral industry.

Maintain the DGGS information management micro-computer network infrastructure.

Key Component Issues for FY2002 – 2003

Escalating Cost of Field Operations:

During the past 18 months, DGGS field operation costs have risen about 20 percent for geologic ground-truth geologic mapping and cost increases approach 40 percent for airborne geophysical surveys.

Much of DGGS's most valuable work for Alaska is done on the frontiers of our state. Our work provides the geologic framework that is used by the private sector to guide new energy and mineral investments. Providing this kind of information means that our field work is moving farther away from the state's limited transportation infrastructure. This, alone, adds to logistical supply costs. Our field programs have always had to rely on fixed-wing and helicopter support for daily access. These costs are rising dramatically. For example, our field parties utilize about 4 hours of helicopter flying time per day to deploy and recover team members. In the summer of 2000 that four hours cost a project \$2050 per day; in 2001 it cost \$2680 per day; in 2002, initial inquiries indicate that it will cost us \$3550 per day. This cost does not include increased cost of fuel and its delivery. We currently have no plausible strategy that would allow us to meet this kind of cost escalation while maintaining current information quality and annual tract coverages.

Geologic Information Accessibility:

Private sector enterprises and government decision makers are under increasing pressure to produce results on a shorter time line. DGGS products and services are specifically aimed at supporting statewide economic development and the mitigation of natural geologic hazards that are often at the core of the issues faced by these decision makers. People engaged in those activities can only benefit from DGGS geological and geophysical data, maps, and reports when they are aware that the data exist and are accessible in useful formats. Additionally, since many of our customer's projects have short time frames, both the information about what type of data are available and the appropriate data need to be provided in a timely manner. DGGS faces a demand for: 1) more widespread and faster access to our geologic database; 2) rapid delivery of special purpose customized presentations of geologic data in response to unique critical needs; and 3) remote delivery of active digital files of the original underlying geologic, geochemical, and geophysical data used to produce our conventional paper-based publications.

The key to meeting these demands is the use of computer technology. During FY01, DGGS secured Federal funding to convert all of its maps and reports to digital format. Early in FY02, these maps and reports were made accessible on the Internet. Funded by a Federal grant, we also are contracting for the design and construction of a Division-wide geologic database management system. This internal system will serve as a prototype for an external Internet accessible system that will allow the public to download active digital data files of original DGGS numeric, text, and graphical geologic data.

Rural Energy:

The lack of developed sources of local energy in rural Alaska is a continuing problem that DGGS is addressing through its coalbed methane program. First funded through a CIP appropriation in FY97, DGGS conducted an initial survey of the state to identify areas that have potential for supplying coalbed methane for local consumption. That work identified three high priority sites and a number of other sites of lower, but significant promise. Subsequent work has been largely funded by soliciting supplemental Federal grants. The work is now at a stage that actual test drilling is needed at the three high priority sites to determine whether coalbed methane gas is present in useful quantities in the subsurface. The cost of drilling is high. Thus, both the private sector and State and Federal governments are reluctant to support the needed drilling. In an attempt to move beyond this impediment, DGGS has developed a detailed proposal with Los Alamos National Laboratory to seek Federal Department of Energy funds to deploy a new light-weight, and ultimately more economical, micro-drilling technology to test both the technology and the coalbed methane potential at three high priority sites in Alaska. We have no assurance that the proposal will be funded. However, if it is funded, the Los Alamos technology will be used at Chignik, Fort Yukon, and Wainwright to test local coalbed methane resources near those villages.

Major Pending Infrastructure Projects and Geologic Hazard Assessments:

Alaska appears to be on the threshold of a major development cycle similar in scale to the construction of the trans-Alaska oil pipeline. There is increasing activity among industry and government to seek ways to expedite the construction of a delivery system to the Lower-48 for North Slope natural gas and an extension of the Alaska Railroad to Canada. A fundamental and prudent first step in undertaking infrastructure development enterprises of this magnitude is a comprehensive engineering geology and geologic hazard assessment of the greater land corridors through which such construction must pass. Such assessments should be made prior to finalizing detailed alignments and prior to detailed geotechnical engineering assessments of those alignments. By statute AS 41.08 DGGS is charged to determine the potential geologic hazards to buildings, roads, bridges, and other installations and structures. This should be done before such structures are built. Prior knowledge of the kind and extent of geologic hazards is the first step in their mitigation. Such knowledge can be factored into design criteria to improve public safety, decrease long-term maintenance costs, and decrease construction costs resulting from encountering unforeseen obstacles.

If these two mega-projects are initiated in the shortest time possible, there is currently a window of about two to three years in which to conduct a detailed reconnaissance-level engineering geology and geologic hazard assessments of the probable infrastructure corridors that will host them. Results of this work would provide valuable information for determining an optimal final alignment, identifying geologic hazards not previously recognized so that design engineers are alerted to sections of the alignment that require unique consideration, and identifying sources of construction materials. Currently, no funds are identified to implement these field studies.

Major Component Accomplishments in 2001

Information Accessibility

Completed scanning all DGGS reports and maps published before 2000 and made them available online through the DGGS Web site. New maps and reports will be added in this format as they are produced.

The DGGS website was accessed over 27,000 times for information on Alaska Geology.

DGGS sold 2,651 professional maps and reports and distributed approximately 4,000 free educational publications.

DGGS staff responded to about 1,000 significant professional geologic information requests from the general public and other agencies.

DGGS staff made 35 public presentations on Alaska geology related to minerals, energy, and engineering geology.

Mineral Resource Appraisal

| Released December 15th | FY2003 Governor | |
|------------------------|---------------------------------|--------|
| 12/18/2001 2:02 | Department of Natural Resources | Page 7 |

In June 2001, completed the third of three planned field investigations designed to provide ground-truth geologic mapping of the Fortymile airborne geophysical survey tract. The data generated will be released in FY02.

Co-planned and participated in an international Alaska – Yukon field workshop focused on Alaska, Yukon, British Columbia, and Canadian Geological Survey geologists meeting to examine key field locations on both sides of the border to reconcile rock nomenclature and other geologic, geophysical, and mineral evidence so that the geologic and geophysical mineral data generated by Alaska and Canadian geologists will have a consistent framework along our common border. The resulting clarity in data representation will help support resource development.

DGGS submitted a successful proposal to NASA for a two-year pilot project that will develop internal remote-sensing expertise to augment traditional field methods in geomorphology, investigating surficial deposits, and evaluating bedrock geology. These techniques will be used to evaluate the placer gold potential of part of the Council placer mining district on the Seward Peninsula. Determining the potential for buried placer deposits may help catalyze economic development in rural communities and benefit the people of Alaska by expanding prospect opportunities for both small- and large-scale mine operations.

Energy Resource Assessment

Located and acquired a commercial high-resolution gravity survey of a portion of the Holitna Basin. This survey will enhance the gas potential assessment of the basin as an energy source for regional mineral development.

Completed helicopter-supported geologic field mapping and oil-related geologic investigations in the Philip Smith Mountains quadrangle that encourage industry exploration for oil and gas in the central North Slope. This project, funded through the USGS STATEMAP program, will produce a 1:63,360-scale geologic map of the Philip Smith Mountains C-5, and portions of the adjacent quadrangles for release in FY02.

DGGS, in cooperation with the U.S. Geological Survey (USGS) and the U.S. Bureau of Land Management-Alaska (BLM) is evaluating Alaska's remote coal basins for their shallow coalbed gas potential. During FY01, DGGS and the Kansas Geological Survey (KGS), through a cooperative research agreement, conducted a shallow seismic study at Fort Yukon to evaluate the lateral continuity and thickness of coal seams beneath the community. The field portion of the project was completed March 31st to April 14th 2001, when approximately 8.5 line miles of seismic reflection study was conducted using the KGS's IVI mini-vibrator. Initial processing of the acquired data indicates a number of significant reflectors present, including the top of the lignite at about 1200 feet and indications are that the coal-bearing zone may be up to 200 feet thick.

In May 2001, DGGS organized and co-sponsored a coalbed methane workshop, "Alaska Coalbed and Shallow Gas Resources." The five-day workshop attracted over 100 participants to activities which included a two-day field trip to view Kenai Peninsula geology, coal exposures and the nation's first commercial liquefied natural gas plant at Nikiski (Days 1 and 2); two short courses (Days 3 and 4); and a full day of technical papers and discussions (Day 5). Attendees included lower 48 coalbed methane producers interested in exploring for coalbed methane in Alaska.

Geologic Materials Center

The DGGS Geologic Materials Center (GMC) received and archived rock sample cuttings representing 274,717 feet of core from 60 Alaska oil or gas exploratory or production wells.

The DGGS GMC received and archived 17,122 feet of diamond-drilled mineral core representing 40 exploratory holes form 5 Alaska mining prospects.

Engineering Geology & Construction Materials

Developed draft ground-motion site-response maps and a draft seismic soil-class map for Anchorage in cooperation with the UAF Geophysical Institute. Planners and engineers will be able to use these maps in conjunction with the building codes to design more earthquake-resistant buildings.

Developed draft tsunami-inundation maps for the Kodiak area in cooperation with the UAF Geophysical Institute, Alaska Division of Emergency Services, and the Kodiak city and borough governments. These maps depict modeled inundation extents of tsunami waves from several scenario earthquakes to guide emergency managers in planning evacuation areas and routes.

DGGS participated in two major NASA workshops to assess needs for satellite and airborne remote-sensing data for scientific work in Alaska. The workshops focused on identifying specific regional problems that might be addressed with remote sensing technologies, and established a formal working relationship with the Alaska SAR Facility at UAF.

DGGS provided recommendations to NASA for candidate areas of Alaska to obtain airborn tandem-mission synthetic aperture radar (SAR) data as part of NASA's 2000 PacRim mission. NASA successfully flew the mission recommended by DGGS, obtaining more than 8,000 square miles of AirSAR data along the proposed Alaska Highway gas pipeline and railroad corridors and over Augustine and Okmok volcanoes.

Developed a comprehensive GIS database for existing construction-materials information along the 416-mile-long Dalton Highway that will help DOT&PF more easily identify sites that will furnish materials for future highway maintenance and upgrade projects.

Statutory and Regulatory Authority

AS 41.08

Geological Development

Component Financial Summary

All dollars in thousands

| | | | All dollars in thousands |
|--|----------------|-------------------|--------------------------|
| Non-Formula Program: | FY2001 Actuals | FY2002 Authorized | FY2003 Governor |
| Non-Formula Program. | | | |
| Component Expenditures: | | | |
| 71000 Personal Services | 2,152.0 | 2,220.0 | 2,322.8 |
| 72000 Travel | 87.2 | 145.4 | 145.4 |
| 73000 Contractual | 967.0 | 1,488.2 | 1,488.2 |
| 74000 Supplies | 292.5 | 151.1 | 151.1 |
| 75000 Equipment | 45.0 | 31.1 | 31.1 |
| 76000 Land/Buildings | 0.0 | 0.0 | 0.0 |
| 77000 Grants, Claims | 0.0 | 0.0 | 0.0 |
| 78000 Miscellaneous | 0.0 | 0.0 | 0.0 |
| Expenditure Totals | 3,543.7 | 4,035.8 | 4,138.6 |
| Funding Sources: | | | |
| 1002 Federal Receipts | 1,163.8 | 1,501.5 | 1,511.9 |
| 1004 General Fund Receipts | 2,049.2 | 2,073.1 | 2,107.1 |
| 1005 General Fund/Program Receipts | 39.0 | 55.0 | 55.1 |
| 1007 Inter-Agency Receipts | 94.6 | 63.7 | 66.4 |
| 1053 Investment Loss Trust Fund | 8.0 | 0.0 | 0.0 |
| 1061 Capital Improvement Project Receipts | 40.8 | 91.3 | 146.9 |
| 1108 Statutory Designated Program Receipts | 148.3 | 251.2 | 251.2 |
| Funding Totals | 3,543.7 | 4,035.8 | 4,138.6 |

Estimated Revenue Collections

| Description | Master Revenue Account | FY2001 Actuals | FY2002 Authorized | FY2002 Cash Estimate | FY2003 Governor | FY2004 Forecast |
|---------------------------------------|------------------------------|-------------------|----------------------|----------------------------|--------------------|--------------------|
| Unrestricted Revenues | | | | | | |
| None. | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Unrestricted Total | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Restricted Revenues | | | | | | |
| Federal Receipts | 51010 | 1,163.8 | 1,501.5 | 1,725.0 | 1,511.9 | 1,196.0 |
| Interagency Receipts | 51015 | 94.6 | 63.7 | 63.7 | 66.4 | 62.0 |
| General Fund Program Receipts | 51060 | 39.0 | 55.0 | 55.0 | 55.1 | 55.0 |
| Statutory Designated Program Receipts | 51063 | 148.3 | 251.2 | 185.0 | 251.2 | 120.0 |
| Capital Improvement Project Receipts | 51200 | 40.8 | 91.3 | 148.8 | 146.9 | 90.0 |
| Restricted Total | | 1,486.5 | 1,962.7 | 2,177.5 | 2,031.5 | 1,523.0 |
| Total Estimated Revenues | | 1,486.5 | 1,962.7 | 2,177.5 | 2,031.5 | 1,523.0 |

| Released December 15th | FY2003 Governor | |
|------------------------|---------------------------------|---------|
| 12/18/2001 2:02 | Department of Natural Resources | Page 10 |

Geological Development

Proposed Changes in Levels of Service for FY2003

No changes in service anticipated.

Summary of Component Budget Changes

From FY2002 Authorized to FY2003 Governor

All dollars in thousands

| | General Funds | Federal Funds | Other Funds | <u>Total Funds</u> |
|--|---------------|---------------|-------------|--------------------|
| FY2002 Authorized | 2,128.1 | 1,501.5 | 406.2 | 4,035.8 |
| Adjustments which will continue current level of service: -Year 3 Labor Costs - Net Change from FY2002 | 34.1 | 10.4 | 4.5 | 49.0 |
| Proposed budget increases: -Establish Funding for Nonperm Geologist Position for Gas Pipeline Project | 0.0 | 0.0 | 53.8 | 53.8 |
| FY2003 Governor | 2,162.2 | 1,511.9 | 464.5 | 4,138.6 |

Geological Development

Personal Services Information

| | Authorized Positions | | Personal Services Costs | | |
|--------------|----------------------|----------|---------------------------|-----------|--|
| | FY2002 | FY2003 | | | |
| | <u>Authorized</u> | Governor | Annual Salaries | 1,771,630 | |
| Full-time | 28 | 28 | COLA | 42,017 | |
| Part-time | 1 | 1 | Premium Pay | 3,130 | |
| Nonpermanent | 9 | 10 | Annual Benefits | 589,063 | |
| | | | Less 3.45% Vacancy Factor | (83,040) | |
| | | | Lump Sum Premium Pay | Ó | |
| Totals | 38 | 39 | Total Personal Services | 2,322,800 | |

Position Classification Summary

| Job Class Title | Anchorage | Fairbanks | Juneau | Others | Total |
|--------------------------|-----------|-----------|--------|--------|-------|
| Administrative Assistant | 0 | 1 | 0 | 0 | 1 |
| Analyst/Programmer III | 0 | 1 | 0 | 0 | 1 |
| Cartographer II | 0 | 2 | 0 | 0 | 2 |
| College Intern I | 0 | 7 | 0 | 0 | 7 |
| Division Director | 0 | 1 | 0 | 0 | 1 |
| Geologist I | 0 | 5 | 0 | 0 | 5 |
| Geologist II | 0 | 3 | 0 | 0 | 3 |
| Geologist III | 0 | 4 | 0 | 0 | 4 |
| Geologist IV | 1 | 4 | 0 | 0 | 5 |
| Geologist V | 0 | 4 | 0 | 0 | 4 |
| Micro/Network Spec I | 0 | 1 | 0 | 0 | 1 |
| Micro/Network Tech I | 0 | 1 | 0 | 0 | 1 |
| Natural Resource Tech II | 0 | 1 | 0 | 0 | 1 |
| Publications Spec II | 0 | 1 | 0 | 0 | 1 |
| Publications Tech II | 0 | 1 | 0 | 0 | 1 |
| Secretary | 0 | 1 | 0 | 0 | 1 |
| Totals | 1 | 38 | 0 | 0 | 39 |